CLAIMS

1. Gas spring for a pressing tool comprising a tube (1) which forms a wall of a cylindrical chamber having a first end wall (2), which constitutes a first base surface and a second end wall (3) which constitutes a second base surface of the cylindrical chamber, in which a piston (10), which is designed to rest against the tube (1), is capable of reciprocating axially in the cylindrical chamber and divides said chamber into a first space (A) between the piston (10) and the first end wall (2) and a second space (B) between the piston (10) and the second end wall (3), and in which the piston (10) is attached to a piston rod (7), which is axially moveable and supported so that it can slide in a piston rod guide (4) at the first end wall (2), and the piston (10) has passages (11, 15, 16, 17) which connect the first space (A) and the second space (B), the passages (11, 15, 16, 17) permitting a flow of gas from the space that is subject to compression to the space that is subject to expansion under the axial movement of the piston rod (7), the gas spring with an opposing force counteracting a movement that is produced by forces acting axially on the piston rod (7) in that the first space (A) and the second space (B) are pressurised by means of a gas, **characterised in that** the passages (11, 15, 16, 17) which permit the flow of gas between the first space (A) and the second space (B) occupy an area which is greater than 5% of the area of the piston (10), the area of the piston being the difference between the cross-sectional areas of the cylindrical chamber and the piston rod, in order to reduce the amount of heat generated in the gas spring.

2. Gas spring according to Claim 1, characterised in that the total area of the passages (11, 15, 16, 17) is greater than 7% of the area of the piston (10).

3. Gas spring according to Claim 1, characterised in that the total area of the passages (11, 15, 16, 17) represents between 5% and 25% of the area of the piston.

4. Gas spring according to Claim 2, characterised in that the total area of the passages (11, 15, 16, 17) represents between 7% and 70% of the area of the piston.

5. Gas spring according to any one of Claims 1 to 4, characterised in that the passages partially comprise a multiplicity of apertures (15) extending axially right through the piston (10)

6. Gas spring according to any one of Claims 1 to 4, characterised in that the passages partially comprise cavities (15, 16, 17) formed from any type of cylindrically shaped space and extending axially right through the piston (10).

7. Gas spring according to any one of Claims 1 to 4, characterised in that the passages partially comprise cavities in the form of recesses (16) in the peripheral surface of the piston and extending axially right through the piston (10).

8. Gas spring according to any one of Claims 1 to 4, characterised in that the passages comprise gaps between a plurality of piston parts which together form the piston (10).

9. Gas spring according to any one of Claims 1 to 4, characterised in that the passages partially comprise connections connecting the first space (A) and the second space (B) to one another at the side of the annular piston (10).

10. Method of reducing a pressure gradient that occurs between a first space (A) and a second space (B) in a pressing tool gas spring which comprises: a tube (1) which forms a wall of a cylindrical chamber having a first end wall (2), which constitutes a first base surface and a second end wall (3) which constitutes a second base surface of the cylindrical chamber and in which a piston (10) is capable of reciprocating axially in the cylindrical chamber, the first space (A) comprising a chamber which is formed between the piston (10) and the first end wall (2) and the second space (B) comprising a chamber which is formed between the piston (10) and the second end wall (3), and in which the piston (10) is attached to a piston rod (7), which is axially moveable and supported so that it can slide in a piston rod guide (4) at the first end wall (2), the gas spring with an opposing force counteracting a movement that is produced by forces acting axially on the piston rod (7) in that the first space (A) and the second space (B) are pressurised by means of a gas, the first space (A) and the second space (B) being connected by way of passages (11, 15, 16, 17) and gas flowing via said passages from the space that is subject to compression to the space that is subject to expansion under the axial movement of the piston rod (7), the method being **characterised in that** said passages (11, 15, 16, 17) which connect the first space (A) to the second space (B) are provided with a total cross-sectional area which represents at least 5% of the area of the piston (10), the piston area being regarded as the difference between the cross-sectional areas of the cylindrical chamber and the piston rod.